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C0081 CORRELACIÓN ENTRE CAMBIO EN VOLUMEN CEREBRAL Y TIEMPO DE RELAJACIÓN EN T2 EN PACIENTES CON DIAGNÓSTICO DE SÍNDROME CLÍNICAMENTE AISLADO (CORRELATION BETWEEN BRAIN VOLUME CHANGE AND T2 RELAXATION TIME IN PATIENTS WITH CLINICALLY ISOLATED SYNDROME)

Alex Rovira Cañellas

Unidad de Resonancia Magnética, Hospital Vall d'Hebron

(Barcelona)

Cristina Auger Acosta

Unidad de Resonancia Magnética, Hospital Vall d'Hebron

(Barcelona)

Manel Alberich Jordà

Unidad de Resonancia Magnética, Hospital Vall d'Hebron

(Barcelona)

Deborah Pareto

Unidad de Resonancia Magnética, Hospital Vall d'Hebron

(Barcelona)

Jaume Sastre Garriga

CEMCAAT, Hospital Vall d'Hebron

(Barcelona)

Mar Tintoré

CEMCAAT, Hospital Vall d'Hebron

(Barcelona)

Xavier Montalban

CEMCAAT, Hospital Vall d'Hebron

(Barcelona)

Francesc Xavier Aymerich Martínez

Unidad de Resonancia Magnética, Hospital Vall d'Hebron

P. Vall d'Hebron 119-129. Edificio Hospital Materno-Infanti. Sótano -208035-Barcelona(Barcelona) España

Regional volumetric studies have suggested that reversible brain volume changes (pseudotrophy) are mostly confined to the white matter. The aim of this study is to correlate pseudo-T2 values (a marker of hydration status) with brain volume changes in patients with clinically isolated syndrome (CIS).

2 Material y Método

96 patients with CIS were included (62 women; median age, 33 [19, 49] years; EDSS median, 2 [0, 4.5]; mean disease duration, 3.78 months). Baseline and 12 months dual echo T2-weighted, and 3D T1-weighted (MPRAGE) sequences were acquired on a 3.0T. The dual-echo sequence was used to produce pseudo-T2 maps (pT2). Pseudo-T2 values were evaluated in regions of normal appearing white matter. MPRAGE sequence was used to obtain white and grey matter volumetric fractions. Association between month 12 and baseline studies in pT2, white and grey matter fractions were evaluated by the Spearman rank correlation. Changes in pT2, white (WM) and grey (GM) fractions among non-Gadolinium(Gd) and Gd-enhanced groups at baseline and month 12 were evaluated by the Kruskal-Wallis test, and Dunn's test (Benjamini-Hochberg option) for post-hoc analysis.

3 Resultados

A significant, though weak positive correlation ($r=0.276$, $p=0.006$) between changes in pT2 and in WM was found. Changes in GM did not correlate with changes in pT2 ($r=-0.002$, $p=0.982$). Differences among non-Gd (non-Gd0, non-Gd12) and Gd-enhanced (Gd0, Gd12) groups were found for changes in pT2 ($p=0.036$). Post-hoc analysis revealed that these differences were only between non-Gd0 and non-Gd12 versus Gd0 and non-Gd12 ($p=0.049$), and Gd0 and non-Gd12 versus Gd0 and Gd12 ($p=0.03$).

4 Conclusiones

The results suggest that white matter volume changes in patients with multiple sclerosis can be partially explained by fluctuations in brain water. They also support the value of pseudo-T2 measures to assess white matter water changes, and its potential role in distinguishing reversible (pseudotrophy) from irreversible (atrophy) brain tissue loss.

5 Agradecimientos, conflictos de interés (opcional)
